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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.   | CONFIRMATION NO. |
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| 10/087,030      | 03/01/2002  | Galen M. Martin      | 17812 (MHM 13509US01) | 6482             |

7590

05/02/2003

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EXAMINER

LEON, EDWIN A

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/087,030

Applicant(s)

MARTIN ET AL.

Examiner

Edwin A. León

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2003 and 31 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-10,12,13,15-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-10,12,13,15-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment and Request for Continued Examination filed March 4, 2003 and March 31, 2003 in which Claims 1, 9, and 17 have been amended and Claims 6, 14 and 20 have been cancelled, has been place of record in the file as Papers No. 8 and 10, respectively.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7-10, 12-13, 15-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (U.S. Patent No. 5,348,488) in view of Okada (U.S. Patent No. 5,252,096). With regard to Claims 1, 5 and 7, Green et al. discloses an electrical connector (10) of a type which is connectable to a substrate (150), comprising: a housing (12); a plurality of electrical contacts (40) carried by the housing (12), each contact (40) having contact interface (44) interconnectable with a reciprocal contact interface (156) carried by the substrate (150); a contact guide (50) having a plurality of

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apertures (56) positioned to align and mate with the contact interfaces (44) of the contacts (40); and the housing (12) including locking post (80) configured to mate with reciprocal aperture (58,59,70) formed in both the contact guide (50) and the substrate (150) for securing the contact guide (50) and the substrate (150) to the housing (12), the locking post (80) having a base portion (30) that is secured within the reciprocal apertures (58,59,70) in the contact guide (50). See Figs. 1-8.

However, Green et al. doesn't show the locking post being a bifurcated post having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and having first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate, at least one of the opposed legs including a locking feature configured to lockingly engage with the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate.

Okada discloses the concept of having a bifurcated post (18,19) having a locking feature (22,23) on a distal end thereof, the locking feature (22,23) being snapably secured within the reciprocal aperture (14) in the substrate (12), and having first and second opposed legs (18,19) of different lengths which are compressible towards one another for insertion into the reciprocal aperture (14) in the substrate (12), at least one of the opposed legs (18,19) including a locking feature (22,23) configured to lockingly engage with the substrate (12) when the opposed legs (18,19) are inserted into the reciprocal aperture (14) in the substrate (12). See Figs. 2, 4 and 6.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Green et al. by making the locking post a bifurcated post having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and having first and second opposed legs of different lengths which are compressible towards one another for insertion into the reciprocal aperture in the substrate, at least one of the opposed legs including a locking feature configured to lockingly engage with the substrate when the opposed legs are inserted into the reciprocal aperture in the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.

With regard to Claim 3, Green et al. discloses the locking post (80) being sized and shaped to form an interference fit with the reciprocal aperture (58,59,70) in the contact guide (50). See Figs. 1-8.

With regard to Claim 4, Green et al. discloses the base portion (30) of the post (80) includes an enlarged diameter portion (30) sized to form an interference fit with the reciprocal aperture (58,59,70) formed in the contact guide (50). See Figs. 1-8.

With regard to Claim 8, Green et al. discloses the contact interfaces (44) comprising male pin connectors. See Figs. 1-8.

With regard to Claims 9, 13 and 15, Green et al. discloses an electrical connector (10), comprising: a housing (12) having a substrate (150) end matable with a substrate (150) and a connector end (18) matable with a second electrical connector (100); a plurality of electrical contacts (40) carried by the housing (12), each contact (40) having

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a first contact interface (22) positioned in the substrate (150) end of the housing (12) for interconnection with a reciprocal contact interface (156) carried by the substrate (150) and a second contact interface (48) positioned in the connector end (18) of the housing (12) for interconnection with a reciprocal contact interface (102) carried by the second electrical connector (100); a contact guide (50) configured to mate with the substrate (150) end of the housing (12), the contact guide (50) including a plurality of apertures (56) positioned to matingly align with the first contact interfaces (44); and a locking post (80) having a base portion (30) for securing the housing (12) to the contact guide (50).

See Figs. 1-8.

However, Green et al. doesn't show the locking post having a distal end snapably securing the housing to the substrate, with first and second opposed legs of different lengths being compressible towards one another to allow the locking mechanism to be inserted into the reciprocal aperture in the substrate.

Okada discloses the concept of having a locking mechanism (20) having the locking post (18,19) having a distal end (22,23) snapably securing the housing (10) to the substrate (12), with first and second opposed legs (18,19) of different lengths being compressible towards one another to allow the locking mechanism (20) to be inserted into the reciprocal aperture (14) in the substrate (12). See Figs. 2, 4 and 6.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Green et al. by having a distal end snapably securing the housing to the substrate, with first and second opposed legs of different lengths being compressible towards one another to allow the locking

mechanism to be inserted into the reciprocal aperture in the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.

With regard to Claim 10, Green et al. discloses the first contact interface (22) being oriented perpendicular to the second contact interface (48). See Figs. 1-8.

With regard to Claim 12, Green et al. discloses the post (80) has an enlarged portion (30) sized to form an interference fit with the reciprocal aperture (58,59,70) in the contact guide (50). See Figs. 1-8.

With regard to Claim 16, Green et al. discloses the first contact interfaces (44) comprising male pin connectors. See Figs. 1-8.

With regard to Claim 17, 19 and 21, Green et al. discloses an electrical connector (10), comprising: a housing (12) having a substrate (150) end matable with the substrate (150) and a connector end (18) matable with a second electrical connector (100); a plurality of electrical contacts (40) carried by the housing (12), each contact (40) having a first contact interface (22) positioned in the substrate end of the housing (12) for interconnection with a reciprocal contact interface (156) carried by the substrate (150) and a second contact interface (48) positioned in the connector end (18) of the housing (12) for interconnection with a reciprocal contact interface (102) carried by the second electrical connector (100); a contact guide (50) configured to mate with the substrate end of the housing (12), the contact guide (50) including a plurality of apertures (56) positioned to matingly align with the first contact interfaces (44); and first and second posts (18) extending from the housing (12), each of the posts (18) having a

base portion (30) configured to mate with a reciprocal aperture (58,59,70) formed on the contact guide (50). See Figs. 1-8.

However, Green et al. doesn't show the locking posts having a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and first and second opposed legs of different lengths having a locking feature and being compressible towards one another to allow the locking mechanism to be inserted into the reciprocal aperture in the substrate.

Okada discloses the concept of having a locking mechanism (20) with locking posts (18,19) having a locking feature (22,23) on a distal end thereof, the locking feature (22,23) being snapably secured within the reciprocal aperture (14) in the substrate (12), and first and second opposed legs (18,19) of different lengths having a locking feature (22,23) and being compressible towards one another to allow the locking mechanism (20) to be inserted into the reciprocal aperture (14) in the substrate (12). See Figs. 2, 4 and 6.

Thus, it would have been obvious of ordinary skill in the art at the time the invention was made to modify the connector of Green et al. by including a locking feature on a distal end thereof, the locking feature being snapably secured within the reciprocal aperture in the substrate, and first and second opposed legs of different lengths having a locking feature and being compressible towards one another to allow the locking mechanism to be inserted into the reciprocal aperture in the substrate as taught in Okada in order to mount, couple and lock the connector to the substrate more efficiently and more firm.



With regard to Claim 18, Green et al. discloses the post (80) has an enlarged portion (30) sized to form an interference fit with the reciprocal aperture (58,59,70) in the contact guide (50). See Figs. 1-8.

With regard to Claim 22, Green et al. discloses the first and second contact interfaces (44) comprising male pin connectors. See Figs. 1-8.

With regard to Claim 23, Green et al. discloses the first contact interface (22) being oriented perpendicular to the second contact interface (48). See Figs. 1-8.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 3-5, 7-10, 12-13, 15-19 and 21-23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

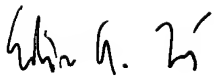
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308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Edwin A. Leon  
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April 29, 2003



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